INTERNATIONAL SEARCH REPORT

International application No.
PCT/US98/10868

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :C07K 1/00; C07H 21/04

US CL :530/350; 536/23.5

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 530/350; 536/23.5

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

MPSRCH

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X -- Y	Database Genbank on MPSRCH, University of Edinburgh, (Edinburgh, UK), No. N20562, HILLIER et al. 'yx39a08.s1 Homo sapiens cDNA clone 264086 3'.' 18 December 1995, compare to SEQ ID No. 11.	1 ------- 2-10, 14, 15, 21
X -- Y	WO 95/31544 A1 (H WEINWURZEL, H.) 23 November 1995, compare Figure 1b to SEQ ID No. 12.	1 --- 2-10, 14, 15, 21
X -- Y	Database Genbank on MPSRCH, University of Edinburgh, (Edinburgh, UK), No. N23080, HILLIER et al. 'yw43d02.s1 Homo sapiens cDNA clone 254979 3'.' 28 December 1995, compare to SEQ ID No. 13.	1 ----- 2-10, 14, 15, 21

[X] Further documents are listed in the continuation of Box C. [ ] See patent family annex.

*	Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier document published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search

02 OCTOBER 1998

Date of mailing of the international search report

28OCT1998

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Form PCT/ISA/210 (second sheet)(July 1992)*

INTERNATIONAL SEARCH REPORT

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X -- Y	Database Genbank on MPSRCH, University of Edinburgh, (Edinburgh, UK), No. G23170, HUDSON, T. 'human STS WI-16915', 31 May 1996, compare with SEQ ID No. 14.	1 ----- 2-10, 14, 15, 21
X -- Y	Database Genbank on MPSRCH, University of Edinburgh, (Edinburgh, UK), No. H18098, HILLIER et al. 'yn47d01.s1 Homo sapiens cDNA clone 171553 3'.' 29 June 1995, compare with SEQ ID No. 15.	1 ----- 2-10, 14, 15, 21
X -- Y	Database Genbank on MPSRCH, University of Edinburgh, (Edinburgh, UK), No. N46256, HILLIER et al. 'yy72g09.s1 Homo sapiens cDNA clone 279136 3'.' 14 February 1996, compare with SEQ ID No. 16.	1 ----- 2-10, 14, 15, 21
X -- Y	Database Genbank on MPSRCH, University of Edinburgh, (Edinburgh, UK), No. N28611, HILLIER et al. 'yx38f03.r1 Homo sapiens cDNA clone 264029 5'.' 04 January 1996, compare with SEQ ID No. 17.	1 ----- 2-10, 14, 15, 21
X -- Y	Database Genbank on MPSRCH, University of Edinburgh, (Edinburgh, UK), No. R70283, HILLIER et al. 'yj81c08.r1 Homo sapiens cDNA clone 155150 5'.' 01 June 1995, compare with SEQ ID No. 18.	1 --- 2-10, 14, 15, 21
X -- Y	Database Genbank on MPSRCH, University of Edinburgh, (Edinburgh, UK), No. T98012, HILLIER et al. 'ye56e07.s1 Homo sapiens cDNA clone 121764 3'.' 29 March 1995, compare with SEQ ID No. 19.	1 ----- 2-10, 14, 15, 21
X -- Y	Database Genbank on MPSRCH, University of Edinburgh, (Edinburgh, UK), No. Z44692, GENEXPRESS. 'H. sapiens partial cDNA sequence; clone 27b07, mRNA sequence.' 21 September 1995, compare with SEQ ID No. 20.	1 ----- 2-10, 14, 15, 21
X -- Y	Database Genbank on MPSRCH, University of Edinburgh, (Edinburgh, UK), No. W83277, MARRA et al. 'mf25e5.r1 Soares mouse embryo NbME13.5 14.5 Mus musculus cDNA clone 406112 5', mRNA sequence.' 12 September 1996, compare with SEQ ID No. 43.	1 ----- 2-10, 14, 15, 21

BOX II. OBSERVATIONS WHERE UNITY OF INVENTION WAS LACKING
This ISA found multiple inventions as follows:

This application contains the following inventions or groups of inventions which are not so linked as to form a single inventive concept under PCT Rule 13.1. In order for all inventions to be searched, the appropriate additional search fees must be paid.

Group I:

Claims 1-10, 14, 15, and 21 drawn to a polynucleotide(s), vector(s) containing the polynucleotide, host cells containing the vector(s) which are SEQ ID NO: X or a polynucleotide encoding the polypeptide Y or a cDNA in the material deposited with American Type Culture Collection with accession number Z wherein the cDNA in Z hybridizes to X. Additionally Group I contains the first method making the cells (claim 14) containing the vector(s) containing the polynucleotide(s) and the first method of use of the cells (claim 15) to make a product. There appear to be a total of 46 polynucleotide sequences of which the first ten (10) are selected for examination and therefore, there are nine (9) remaining additional groups of four (4) polynucleotide sequences.

Group II:

Claims 11, 12, 16, and 23 drawn to polypeptides and/or fragments thereof with the amino acid sequence defined by SEQ ID NO: Y as found in the material deposited with the American Type Culture Collection with accession number Z. There appear to be a total of 74 polypeptide sequences and therefore 73 additional species of proteins.

Group III:

Claim 13, drawn to an antibody and/or fragments thereof that bind to a polypeptide with the amino acid sequence defined by SEQ ID NO: Y as found in the material deposited with the American Type Culture Collection with accession number Z. There appear to be a total of 74 antibodies that correspond to the SEQ ID NOs: for the "Y" and "Z" sequences and therefore 73 additional species of proteins.

Group IV:

Claim 17, drawn to a process of preventing, treating, or ameliorating a medical condition by administering a polypeptide or a polynucleotide which a second/alternative process of use of the second product and of an alternative process of use of the first claimed product in Group I.

In Group IV, and where additional fees are paid, the claims are searched only insofar as they are applicable to the selected polypeptide and its corresponding SEQ ID NO: as the first species as directed to a process practiced using a polypeptide. The second species is the practice of the process using a polynucleotide. In each instance, the same selected polypeptide as for the first species of Group II and for the first 10 polynucleotide sequences for Group I would be examined. Applicant may elect to pay additional fees for each additional o the 73 different polypeptide species beyond the first one (1) polypeptide and/or the first 10 polynucleotides as set forth in the above paragraphs directed to Group I and II.

Group V:

Claim 18, drawn to a method of diagnosis of a pathological condition an another alternative process of use of the first claimed product in Group I. Additionally Group V contains indica that there are a total of 46 polynucleotide sequences and therefore, nine(9) additional groups of four (4) polynucleotide sequences beyond the first ten (10) sequences.

Group VI:

Claim 19, drawn to a method of diagnosis of a pathological condition an another alternative process of use of the polypeptide. There appear to be a total of 74 polypeptide sequences and therefore 73 additional species of proteins.

Group VII:

Claim 20, drawn to a method of identification of a binding partner for a polypeptide. There appear to be a total of 74 polypeptide sequences and therefore 73 additional species of proteins.

Group VIII:

Claim 22, drawn to a method of identification of function of a protein is another alternative process of use of the product in Group I. Additionally Group V contains indica that there are a total of 46 polynucleotide sequences and therefore, nine(9) additional groups of four (4) polynucleotide sequences beyond the first ten (10) sequences.

The inventions listed as Groups I through VIII do not relate to a single inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons.

Claims of Group I are drawn to nucleotides, nucleotide constructs, and/or methods requiring the use of nucleotides or nucleotide constructs that contain more than ten individual, independent, and distinct nucleotide sequences in alternative form. Accordingly, these claims are subject to lack of unity as outlined in 1192 O.G. 68 (19 November 1996).

For Group I, the first ten (10) of the individual polynucleotide sequences designated as "X" by SEQ ID NO: as set forth in the application (see for example page 29+ and/or the SEQUENCE LISTING) are included for search. The corresponding SEQ ID NO: for "Y" and "Z" for each selected "X" should also be noted. The search of the no more than ten sequences may include the complements of the selected sequences and, where appropriate, may include subsequences within the selected sequences (e.g., oligomeric probes and/or primers).

In Group IV (as directed to the species which are polynucleotides)should applicant pay the additional fee for the second appearing species in Group IV which are polynucleotides, first ten (10) of the individual polynucleotide sequences designated as "X" by SEQ ID NO: as set forth in the application (see for example page 29+ and/or the SEQUENCE LISTING) are included for search of Group IV should the fees for Group IV be paid. This is also applied to Groups V and VIII. The corresponding SEQ ID NO: for "Y" and "Z" for each selected "X" should also be noted. The search of the no more than ten sequences may include the complements of the selected sequences and, where appropriate, may include subsequences within the selected sequences (e.g., oligomeric probes and/or primers).

Where Applicant may elect to pay additional fees for a search of sequences beyond the initial ten (10) polynucleotide sequences, and in accordance with 1192 O.G. 68 (19 November 1996), applicant may select additional groups of polynucleotides consisting of four (4) sequences beyond the initial ten (10) sequences for Group I which would then be searched with Group I upon payment of the requisite fees for the requsite Groups beyond Group I.

As to the polypeptides of Groups II, III, IV (as directed to a species which is a polypeptide), VI, and VII each is a distinct and different protein. Should additional fees for the above indicated Groups be paid, the first amino acid sequence identified from the SEQUENCE LISTING by applicant would be searched with the additional group for which the additional search fees were paid.

Applicant may select additional proteins and or antibodies to be searched by specifying the appropriate SEQ ID NOs and payment of the requisite additional fees for each single additional particular species that are selected beyond the one (1) protein identified by SEQ ID NO:.

The SEQ ID NOs in Group I define, absent evidence to the contrary, structurally distinct and different proteins. Note the present application written description (page 5+) refers to the protein encoded by gene 1 as likely to be involved in promotion of a variety of cancers whereas gene 2 (pages 6-7) is directed to apparently a variety but not correlated immune system disorder(s) whereas gene 3 (pages 7-8) is asserted at page 7 to be a mediator of ligand dependent AF-2. Each of which and absent factual evidence to the contrary, are directed to genes encoding distinct and different proteins and are therefore distinct and different genes and appear to map to different chromosomes.

As to the protein of Group II and the antibody of Group III, each is distinct and different for the reasons indicated in the preceding paragraph and because the proteins have distinct and different chemical, physical, and biological properties from that of DNA/polynucleotides/vectors and cells containing same.

Groups IV through VIII are directed to alternative processes of use of the Group I and II compositions where Group I contains in claims 14 and 15, the first claimed method of making the polynucleotide and the first claimed process of use of the cells containing the vector which contains the polynucleotides.